

=> d his

(FILE 'USPAT' ENTERED AT 10:00:02 ON 22 FEB 1999)

L1 884 S DATABASE AND TEMPORAL  
L2 138859 S MEDIA OR MULTIMEDIA  
L3 379 S L1 AND L2  
L4 101214 S CLIP?  
L5 77 S L3 AND L4  
L6 18 S (TAG OR TAGS) AND L5  
L7 18 S CONTROL? AND L6  
L8 12 S TRANSITION# AND L7  
L9 12 S SELECT? AND L8  
L10 0 S (DESELECT OR DESELECTING) AND L9  
L11 12 S RANGE# AND L9  
L12 6 S CUE# AND L11

=> d cit l12 1-6

1. 5,867,654, Feb. 2, 1999, Two monitor videoconferencing hardware; Lester F. Ludwig, et al., 345/330 [IMAGE AVAILABLE]
2. 5,854,893, Dec. 29, 1998, System for teleconferencing in which collaboration types and participants by names or icons are **selected** by a participant of the teleconference; Lester F. Ludwig, et al., 395/200.34, 200.35, 200.57, 200.61, 200.76, 200.79 [IMAGE AVAILABLE]
3. 5,802,294, Sep. 1, 1998, Teleconferencing system in which location video mosaic generator sends combined local participants images to second location video mosaic generator for displaying combined images; Lester F. Ludwig, et al., 395/200.34; 370/260, 267; 379/202; 395/200.68 [IMAGE AVAILABLE]
4. 5,758,079, May 26, 1998, Call **control** in video conferencing allowing acceptance and identification of participants in a new incoming call during an active teleconference; Lester F. Ludwig, et al., 395/200.34; 345/330; 370/261; 379/202 [IMAGE AVAILABLE]
5. 5,689,641, Nov. 18, 1997, **Multimedia** collaboration system arrangement for routing compressed AV signal through a participant site without decompressing the AV signal; Lester F. Ludwig, et al., 395/200.71; 348/15, 16; 370/260, 270; 395/200.34 [IMAGE AVAILABLE]
6. 5,617,539, Apr. 1, 1997, **Multimedia** collaboration system with separate data network and A/V network **controlled** by information transmitting on the data network; Lester F. Ludwig, et al., 395/200.35; 345/330; 348/12; 370/260; 395/200.68, 200.79 [IMAGE AVAILABLE]

=> d cit 111 1-12

1. 5,870,768, Feb. 9, 1999, Expert system and method employing hierarchical knowledge base, and interactive **multimedia**/hypermedia applications; Amir Hekmatpour, 707/501; 345/339, 347; 706/45 [IMAGE AVAILABLE]
2. 5,867,654, Feb. 2, 1999, Two monitor videoconferencing hardware; Lester F. Ludwig, et al., 345/330 [IMAGE AVAILABLE]
3. 5,854,893, Dec. 29, 1998, System for teleconferencing in which collaboration types and participants by names or icons are **selected** by a participant of the teleconference; Lester F. Ludwig, et al., 395/200.34, 200.35, 200.57, 200.61, 200.76, 200.79 [IMAGE AVAILABLE]
4. 5,822,745, Oct. 13, 1998, Expert system and method employing hierarchical knowledge base, and interactive **multimedia**/hypermedia applications; Amir Hekmatpour, 706/59, 46, 60 [IMAGE AVAILABLE]
5. 5,806,056, Sep. 8, 1998, Expert system and method employing hierarchical knowledge base, and interactive **multimedia**/hypermedia applications; Amir Hekmatpour, 706/50, 45, 46, 61 [IMAGE AVAILABLE]
6. 5,802,294, Sep. 1, 1998, Teleconferencing system in which location video mosaic generator sends combined local participants images to second location video mosaic generator for displaying combined images; Lester F. Ludwig, et al., 395/200.34; 370/260, 267; 379/202; 395/200.68 [IMAGE AVAILABLE]
7. 5,758,079, May 26, 1998, Call **control** in video conferencing allowing acceptance and identification of participants in a new incoming call during an active teleconference; Lester F. Ludwig, et al., 395/200.34; 345/330; 370/261; 379/202 [IMAGE AVAILABLE]
8. 5,720,007, Feb. 17, 1998, Expert system and method employing hierarchical knowledge base, and interactive **multimedia**/hypermedia applications; Amir Hekmatpour, 706/50, 11, 46 [IMAGE AVAILABLE]
9. 5,696,885, Dec. 9, 1997, Expert system and method employing hierarchical knowledge base, and interactive **multimedia**/hypermedia applications; Amir Hekmatpour, 706/59, 12 [IMAGE AVAILABLE]
10. 5,689,641, Nov. 18, 1997, **Multimedia** collaboration system arrangement for routing compressed AV signal through a participant site without decompressing the AV signal; Lester F. Ludwig, et al., 395/200.71; 348/15, 16; 370/260, 270; 395/200.34 [IMAGE AVAILABLE]
11. 5,644,686, Jul. 1, 1997, Expert system and method employing hierarchical knowledge base, and interactive **multimedia**/hypermedia applications; Amir Hekmatpour, 706/45, 53, 61; 707/501 [IMAGE AVAILABLE]
12. 5,617,539, Apr. 1, 1997, **Multimedia** collaboration system with separate data network and A/V network **controlled** by information transmitting on the data network; Lester F. Ludwig, et al., 395/200.35; 345/330; 348/12; 370/260; 395/200.68, 200.79 [IMAGE AVAILABLE]

US PAT NO: 5,440,730 [IMAGE AVAILABLE] L14: 1 of 1  
TITLE: Time index access structure for temporal databases having  
concurrent multiple versions

1. 5,440,730, Aug. 8, 1995, Time index access structure for temporal  
databases having concurrent multiple versions; Ramez A. Elmasri, et  
al., 707/203; 364/282.1, 282.3, DIG.1; 711/159 [IMAGE AVAILABLE]

=> d ab 114

US PAT NO: 5,440,730 [IMAGE AVAILABLE] L14: 1 of 1

ABSTRACT:

A time index for temporal databases is provided which enables the retrieval of database object versions that are valid during specified time periods. Unlike prior access and retrieval structures, the present index is based on objects whose search values are time intervals rather than time points. A series of ordered indexing points is defined by the start and end of object version intervals and these points are used to build an indexing structure, which may take the form of a B.sup.+ -tree. Each leaf node entry of the B.sup.+ -tree represents an indexing point and has an associated bucket of pointers which identify all object versions that are valid at that time. Storage space is reduced by including only incremental change indicators in the buckets of non-leading leaf entries and calculating needed pointers from such indicators. The time index may be employed in multi-level structures with attribute indexes to greatly improve the efficiency of temporal search operations, such as aggregate functions and temporal selection, as well WHEN and JOIN operators.